Meeting Minutes
Lower Passaic River Study Area Interim Remedy Current Conditions Sampling Meeting #5 - Biota
April 18, 2019

Location: Web conference

Participants:

EPA Team:
Michael Sivak
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NJDEP Team:
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CPG Team:
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Mike Johns
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CPG presented a slide deck summarizing their current proposal for the biota sampling program.

CPG proposed biota sampling would occur from RM 8.3 – RM 15 (the slide deck indicated RM 14.7, but the RM was confirmed in the meeting to be RM 15) and samples would be analyzed for TCDD and total PCBs. DEP noted they did not agree with analyzing for only two chemicals of concern (COCs). DEP also disagreed with not sampling above RM 15 and requested a technical basis. CPG stated that the chemistry data from above RM 15 will not be used to evaluate the IR, so there is no need for fish collection.

CPG listed the species to be targeted: forage fish (primarily juvenile sunfish), eels, blue crabs, carp, and white perch, along with target size ranges. CPG proposed using RM 8.3 – RM 15 as a single reach from which to collect biota. CPG believes they can age a subset of fish and they propose using scales as opposed to otoliths.

CPG did a statistical power analysis to determine how many fish they would need to collect to detect a 20% change in the mean PCB tissue concentrations and arrived at five to ten composite samples (e.g., compositing three to five single carp).

A conversation was held on lipid content analytical methods. CPG is proposing to use the Alpha Analytical method for lipid content. The method reported to be proposed for biota collected in the lower 8-Mile baseline program is modified Soxhlet extraction from EPA Method 1613B. The Bligh and

Dyer method is not being proposed because the method involves chloroform and laboratories do not want to run it. EPA noted similar methods will be used in both the upper 9-Mile program and the lower 8-Mile program.

EPA will check if the names of the laboratories to be used in lower 8 can be shared with the CPG.

The EPA stated to the CPG the COCs to be analyzed for in surface water and biota for the upper 9-Mile program should be the same eight COCs analyzed in the lower 8 program (as identified in the lower 8 ROD). CPG asked if a prioritization list (if enough volume cannot be collected for all analyses, which analyses should be run first) will be provided. The EPA replied the priority list in the RI can be revisited and possibly used. The EPA will develop a prioritization list.

EPA presented a slide deck proposing their main direction for the biota sampling program.

The first few slides presented an introduction, data quality objectives (DQOs), and the chemical list to monitor. No discussions were held for these slides.

The first discussion/question was on the species to sample. EPA noted catfish and bass should be caught and analyzed to include in the evaluation of the food web model performance, because these species are key fish for human consumption. Because these fish are only being used for food web model evaluation, fewer samples than the other species could potentially be collected. Because catfish are abundant, catching enough samples is not an issue. However, EPA recognizes catching enough bass may be an issue and the EPA will consider proposals from the CPG on the size and amount of bass samples to collect, along with a maximum level of effort to expend for field collection. Also, CPG said they would identify the collection size range for these two species.

EPA summarized the results of their statistical power analysis of carp, perch, and eel. The analysis demonstrated that three-fish composites were a reasonable approach and that approximately 25 composite samples per species per reach were necessary at a power of 0.8 to detect a 50% change in 2,3,7,8 TCDD tissue concentrations. Carp required the larger number (about 25) of composites and eel and perch required fewer samples.

EPA is comfortable with pooling two years of data to achieve the required number of composite samples, though the preference is to collect all necessary fish in a single sampling year. Year 3 would be used as an option year, if data can be collected and not impacted by lower 8 remedial activities.

CPG noted they would like to look at data graphically in addition to the statistical analysis as required in EPA's DQO1. EPA is in favor of using more robust statistical methods to more defensibly and definitively show changes in tissue concentrations. However, EPA is comfortable using graphical methods along with the appropriate statistical methods. EPA suggest showing differences in means and the confidence intervals around the means.

CPG emphasized the difficulty of catching fish above RM15 and all participants acknowledged this issue. For the upper reach (above RM15), CPG will identify certain target species that are statistically important to the remedy, along with a species quantity goal.

CPG stated the forthcoming QAPP will only describe sampling for 2019, it will not contain future events. The CPG, along with EPA and DEP, will assess the data from 2019 and propose sampling for 2020. DEP requested the language of fish sizing and compositing methods be clearly described in the QAPP.

In response to a DEP question, EPA believes more samples can be collected in the lower seven miles (RM 8.3 – RM 15) than in the upper two miles (RM 15 to Dundee Dam) to make up for fewer samples collected in the upper two miles. However, EPA noted there is value in being consistent with the number of samples collected in each reach.

The conversation returned to the laboratories. CPG noted if there is a desire to change laboratories (e.g., for consistency with lower 8 or the future EPA upper 9 laboratory) the CPG needs to know as soon as possible about the change to incorporate the laboratory SOP into the QAPP. The CPG does not think they can change laboratories this late in the planning process. EPA agrees the issue of laboratory variability can be assessed with performance samples and changing laboratories is not necessary.

CPG will contact the EPA if an additional meeting is necessary to discuss the biota sampling program further.

Action Items:

- EPA to check if the names of the laboratories to be used in lower 8 can be shared with the CPG.
- EPA to develop a prioritization list for biota analyses. The priority list in the RI can be revisited and possibly used.